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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,252	11/21/2001	Leonid B. Galperin	106172	2148

23490 7590 04/08/2004

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EXAMINER

ARNOLD JR, JAMES

ART UNIT PAPER NUMBER

1764

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,252

Applicant(s)

GALPERIN ET AL.

Examiner

James Arnold, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 March 2004 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uppal et al. (USPN 5,365,009) in view of Mohr et al. (USPN 6,040,259).

The Uppal reference discloses a process for regenerating a hydrocarbon conversion catalyst comprising a zeolite and contact of the catalyst with ozone. The catalyst does not

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require a halogen-containing compound. See Abstract and Column 8, lines 53-54. The reference discloses removal of carbonaceous material. See Abstract. The reference discloses a contact temperature of from about 20 C to 200 C. See Abstract. The reference discloses a reaction pressure between about 0 and 1000 psig (0 and 6895 kPa(g).) See Column 4, lines 22-26. The reference discloses contacting the catalyst with air and oxygen. See Column 4, lines 13-15.

The reference does not disclose the use of zeolite L. The reference does not disclose the full range of contacting temperature between 20C and 250C. The reference does not disclose a concentration of ozone of from about 0.1 to about 5 mol%. The reference does not disclose a gas hourly space velocity of up to about 10,000hr⁻¹. The reference does not disclose a zeolite L that contains metals selected from IUPAC Groups 6-10, and Group 14.

The Mohr reference discloses zeolite L as a hydrocarbon conversion catalyst and it discloses metals selected from IUPAC Groups 6-10 and 14. See Column 7, lines 35-47 and Column 21, lines 35-40.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the reference of Uppal to utilize Mohr's zeolite L and Mohr's zeolite which contains IUPAC Groups 6-10 and 14 because the catalyst of Mohr is suitable for hydrocarbon conversion and zeolite catalysts including zeolite L have similar properties. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the full range of contacting temperature between 20C and 250C because a contact temperature of from about 20 C to 200 C is disclosed by Uppal and since the ranges overlap it would be appropriate to adjust the temperatures for optimal process performance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize

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a concentration of ozone of from about 0.1 to about 5 mol% because ozone is disclosed by Uppal and it would be appropriate to use it in any concentration that would render it effective. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a gas hourly space velocity of up to about $10,000\text{hr}^{-1}$ because adjusting the gas hourly space velocity allows for the most efficient use of the gaseous stream in the regeneration of the catalyst.

Response to Arguments

Applicant's arguments have been fully considered and are deemed persuasive; however, new grounds of rejection are set forth in this Office Action.

Conclusion

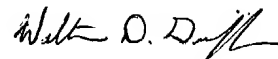
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Arnold, Jr. whose telephone number is 571-272-1443. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:00 PM; Fridays from 8:30 AM-5:00 PM with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ja
April 4, 2004



Walter D. Griffin
Primary Examiner